



A publication of Fairfax County, Virginia



ILLUSTRATED PLANNING GUIDE

HIGH-PILED STORAGE PLAN

As Specified in the Permit Application Guideline for High-Piled Storage

Office of the Fire Marshal

10700 Page Avenue
Fairfax, Virginia 22030
Telephone: 703-246-4849
Fax: 703-246-4872
TTY: 711 or 1-800-828-1120
www.fairfaxcounty.gov/fr/prevention/

This illustrated planning guide is intended to assist in the development of a high-piled storage plan. More specifically, it can be used to guide designers through a thirteen point process for completing the high-piled storage floor plan. In addition, this guide also provides examples of required markings and signage associated with high-piled combustible storage. However, this guide is not intended to prescribe the required template to be used to prepare the plan submittal, and is for illustration purposes only. Designers are reminded to consult the high-piled storage permit application guideline for all documentation requirements related to high-piled storage plans. The guideline is available online at: www.fairfaxcounty.gov/fr/prevention/fmpublications/fmhpstorage.pdf

When Required. A high-piled storage plan shall be submitted for any of the following circumstances or conditions: 1) At the time of building permit application for new structures designed to accommodate high-piled combustible storage; 2) When requesting a change of occupancy/use or when increasing the storage hazard of an existing high-piled combustible storage arrangement; 3) At the time of application for an operational permit (i.e., Fire Prevention Code Permit) to maintain any high-piled combustible storage area.

Minimum Required Copies. Three (3) copies of the high-piled storage plan shall be included in the plan submittal. This typically includes the high-piled combustible storage plan review application, required plan review documents, and completed evacuation plan for public accessible storage areas and large mercantile occupancies.

Floor Plan Specifications. Designers shall provide a scaled floor plan of the building showing locations and dimensions of all high-piled combustible storage areas and storage arrangements. Scaled drawings shall be: **1/8 inch = 1 foot**. Dimensional drawings are not acceptable.

For more information about high-piled combustible storage planning requirements in Fairfax County, contact the Fire Inspections Branch at 703-246-4849, or visit the web page at: www.fairfaxcounty.gov/fr/prevention/hpcs.htm

Fairfax County is committed to nondiscrimination on the basis of disability in all county programs, services and activities. Reasonable accommodations will be provided upon request. Materials such as this publication may be available in alternate formats. To request reasonable ADA accommodations or materials in alternative formats, call the Office of the Fire Marshal at 703-246-4803 (TTY: 711 or 1-800-828-1120) or write us at the following address: 10700 Page Avenue, Fairfax, VA 22030

All the basic plan information should be shown on the plans.

- 1. Type of Plan
- 2. Sheet Number
- 3. Location Name / Address
- 4. Designer Information
- 5. Codes and Standards Used
- 6. Notes / General Comments

5	Code and Standards:	
	SFPC: (Edition Year) NFPA 13: (Edition Year)	
4	Designer Company Name Company Address	
	Drawn By:	Date:
3	Location Name – Tenant Location Address w/ Suite Number	
1	High-Piled Storage Plan	2 HPS-001

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Sprinkler System Information				
Encapsulated Storage	Density / Area	Temperature of Heads	ESFR Heads	Aisle Width
No	0.2 / 2000	165°	No	8 ft
NFPA 13 or 231 design curve and reduction information.				

Notes:

All the basic plan information should be shown on the plans (cont.):

7. Symbol Legend

8. Scale 1/8" = 1'

8Scale 1/8" = 1'

9. Sprinkler System Information

7Symbol Legend

Code and Standards:

SFPC: (Edition Year)
NFPA 13: (Edition Year)

Designer Company Name
Company Address

Drawn By:

Date:

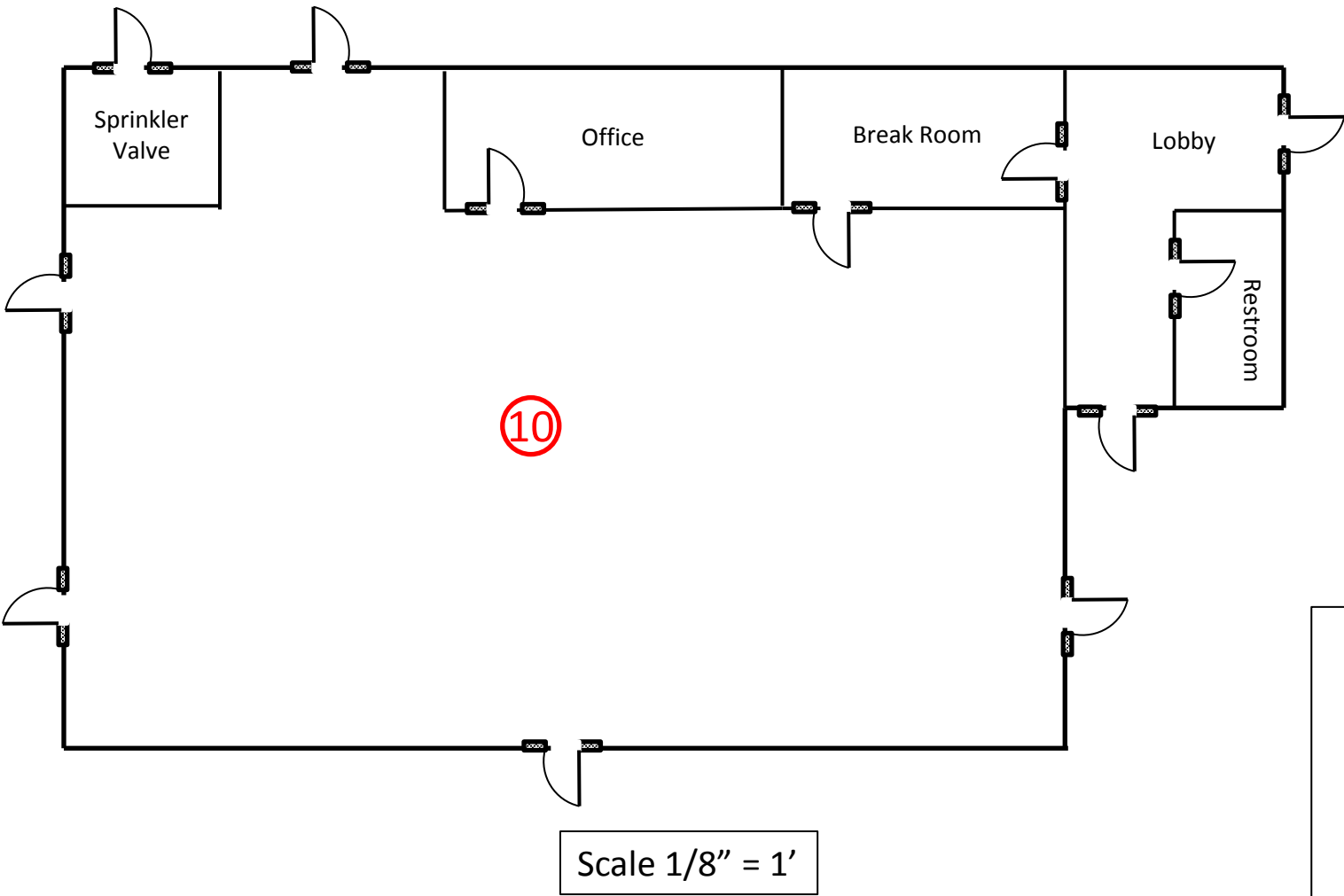
Location Name – Tenant
Location Address w/ Suite Number

High-Piled Storage Plan

HPS-001

Sprinkler System Information				
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Notes:



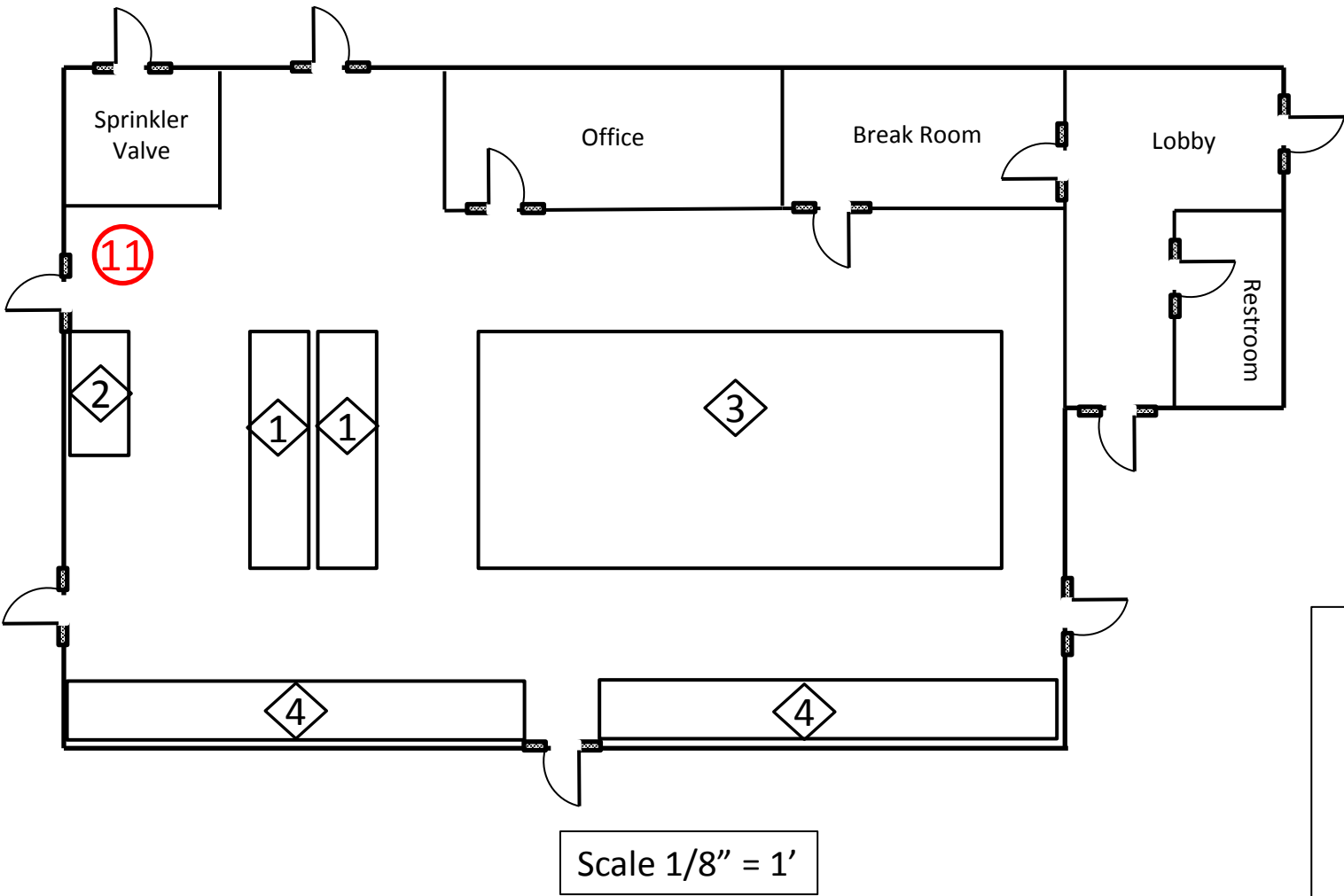
Symbol Legend

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SFPC: (Edition Year)	
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Designer Company Name	
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High-Piled Storage Plan	HPS-001

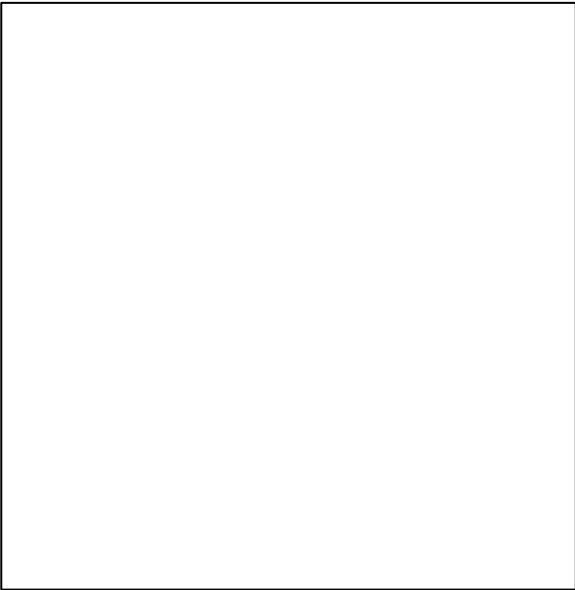
10. Create a plan view of your building.

Sprinkler System Information				
Encapsulated Storage	Density / Area	Temperature of Heads	ESFR Heads	Aisle Width
No	0.2 / 2000	165°	No	8 ft
NFPA 13 or 231 design curve and reduction information.				

Notes:



Symbol Legend

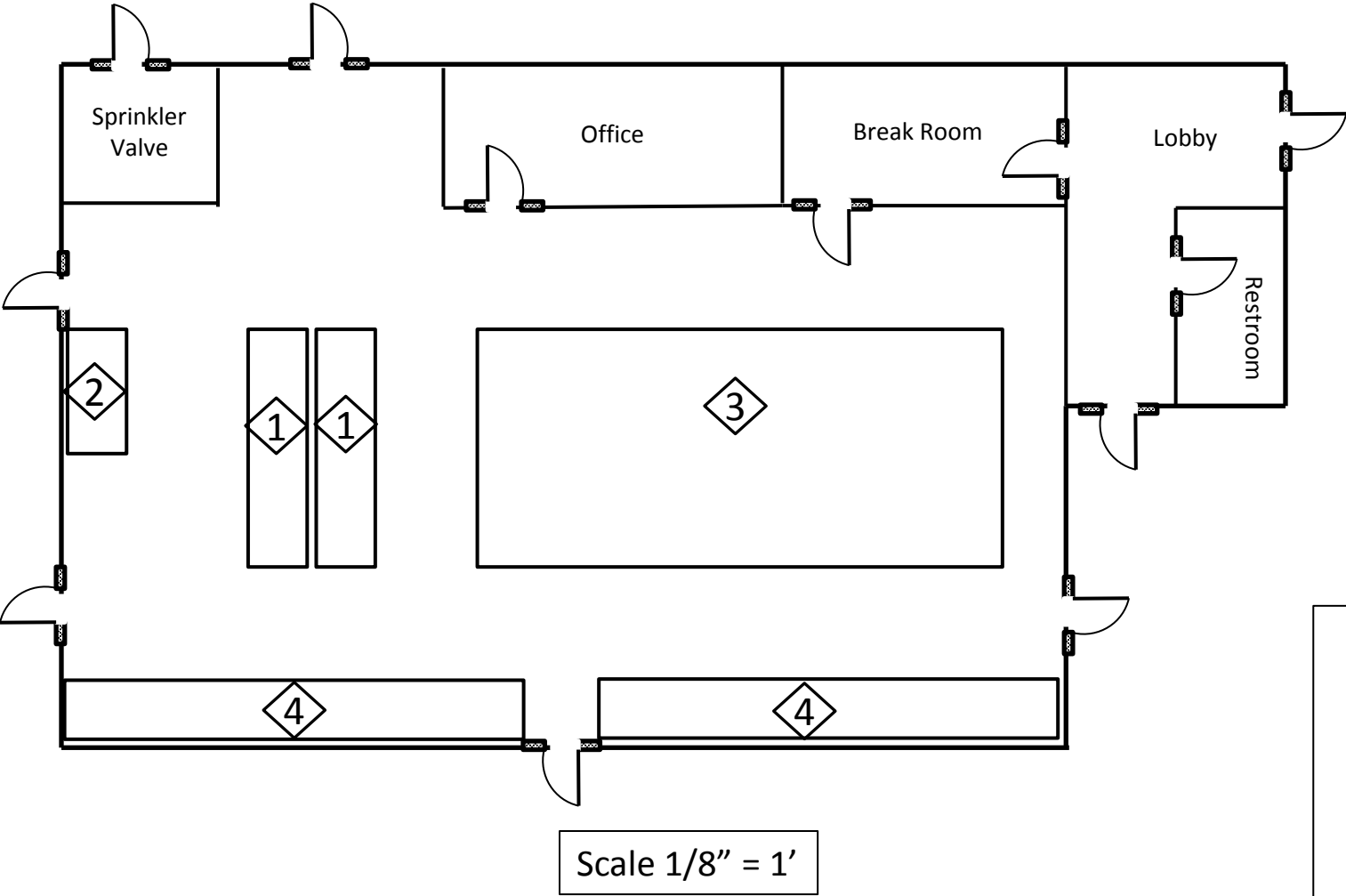


Code and Standards:	
SFPC: (Edition Year)	
NFPA 13: (Edition Year)	
Designer Company Name	
Company Address	
Drawn By:	Date:
Location Name – Tenant	
Location Address w/ Suite Number	
High-Piled Storage Plan	HPS-001

11. Create a plan view of your high-piled storage area.
Identify each arrangement

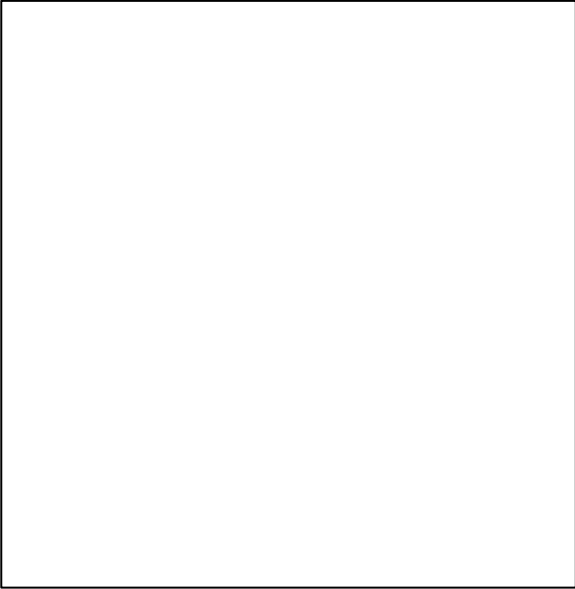
Sprinkler System Information

Encapsulated Storage	Density / Area	Temperature of Heads	ESFR Heads	Aisle Width
No	0.2 / 2000	165°	No	8 ft
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- Notes: 12
- 1 Rack Storage – Double Row Racks – Class IV Commodity
Max Storage Height is 15 feet
Transverse flue space is 6 inches.
Longitudinal flue space is not required.
 - 2 Rack Storage – Single Row Racks – High-Hazard Storage –
Max Storage Height is 15 feet, Limited to 120 sq./ft.
Transverse flue space is 3 inches.
Longitudinal flue space is not required.
 - 3 Pile Storage – Class III Commodity using wood crates –
Max Storage Height is 17.5 feet,
Maximum pile dimension is 100 ft.
 - 4 Shelf Storage – Class III Commodity – Open record storage
Max Storage Height is 17.5 feet
1. Building Square Footage: 23,000
 2. High-Piled Combustible Storage Square Footage: 13, 500
 3. Fire extinguishers: Rating 4A: 40B: C
 4. Fire department access doors are required.
 5. Heat and smoke ventilation is required.

Symbol Legend



Code and Standards:

SFPC: (Edition Year)
NFPA 13: (Edition Year)

Designer Company Name
Company Address

Drawn By: Date:

Location Name – Tenant
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High-Piled Storage Plan	HPS-001
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12. Identify each high-piled storage arrangement and restrictions to storage height.

Sprinkler System Information

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Notes:

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Rack Storage – Double Row Racks – Class IV Commodity
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- 2

Rack Storage – Single Row Racks – High-Hazard Storage –
Max Storage Height is 15 feet, Limited to 120 sq./ft.
Transverse flue space is 3 inches.
Longitudinal flue space is not required.
- 3

Pile Storage – Class III Commodity using wood crates –
Max Storage Height is 17.5 feet,
Maximum pile dimension is 100 ft.
- 4

Shelf Storage – Class III Commodity – Open record storage
Max Storage Height is 17.5 feet
1. Building Square Footage: 23,000

2. High-Piled Combustible Storage Square Footage: 13, 500

3. Fire extinguishers: Rating 4A: 40B: C

4. Fire department access doors are required.

5. Heat and smoke ventilation is required.
- The diagram is a floor plan of a storage facility. It features several rooms: a Sprinkler Valve room, Office (CLG - 24'-6"), Break Room, Lobby, and Restroom. A large central area is designated for storage, with a main aisle labeled 'Aisle - 16\''. Storage areas are marked with 'MSH' (Maximum Storage Height) and 'CLG' (Ceiling Height) labels. The plan includes various safety symbols: diamond-shaped signs with numbers 1, 2, 3, and 4 indicating different storage types; rectangular signs for 'FE' (Fire Extinguisher), 'NS' (No Smoking Signs), 'FDA' (Fire Department Access Door), and 'KB' (Fire Department Key Box); and stippled rectangular areas representing 'Automatic Smoke/Heat Vents'. A scale bar at the bottom indicates 'Scale 1/8" = 1\''. The plan also shows door swings and wall thicknesses.
- 13 Symbol Legend
- | | |
|---------------|-------------------------------|
| FE | Fire Extinguisher, 4A: 40B: C |
| NS | No Smoking Signs |
| MSH | Maximum Storage Height |
| FDA | Fire Department Access Door |
| KB | Fire Department Key Box |
| CLG – xx'-xx" | Ceiling Height |
| | Automatic Smoke/Heat Vents |
- | | |
|----------------------------------|---------|
| Code and Standards: | |
| SFPC: (Edition Year) | |
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| High-Piled Storage Plan | HPS-001 |
13. Show location of fire extinguishers, maximum storage signs, no smoking signs, sprinkler shutoff valves, fire department access door, fire department key box, etc .

Sprinkler System Information

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- 4

Shelf Storage – Class III Commodity – Open record storage
Max Storage Height is 17.5 feet
1. Building Square Footage: 23,000

2. High-Piled Combustible Storage Square Footage: 13, 500

3. Fire extinguishers: Rating 4A: 40B: C

4. Fire department access doors are required.

5. Heat and smoke ventilation is required.
- Symbol Legend
- | | |
|---------------|-------------------------------|
| FE | Fire Extinguisher, 4A: 40B: C |
| NS | No Smoking Signs |
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| <div></div> | Automatic Smoke/Heat Vents |
- Code and Standards:
- SFPC: (Edition Year)
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- Designer Company Name
Company Address
- Drawn By: Date:
- Location Name – Tenant
Location Address w/ Suite Number
- High-Piled Storage Plan HPS-001
- This is an example of the completed plan. Remember you are responsible for the plan creation and providing all the relevant information as it pertains to your business.
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Sprinkler System Information

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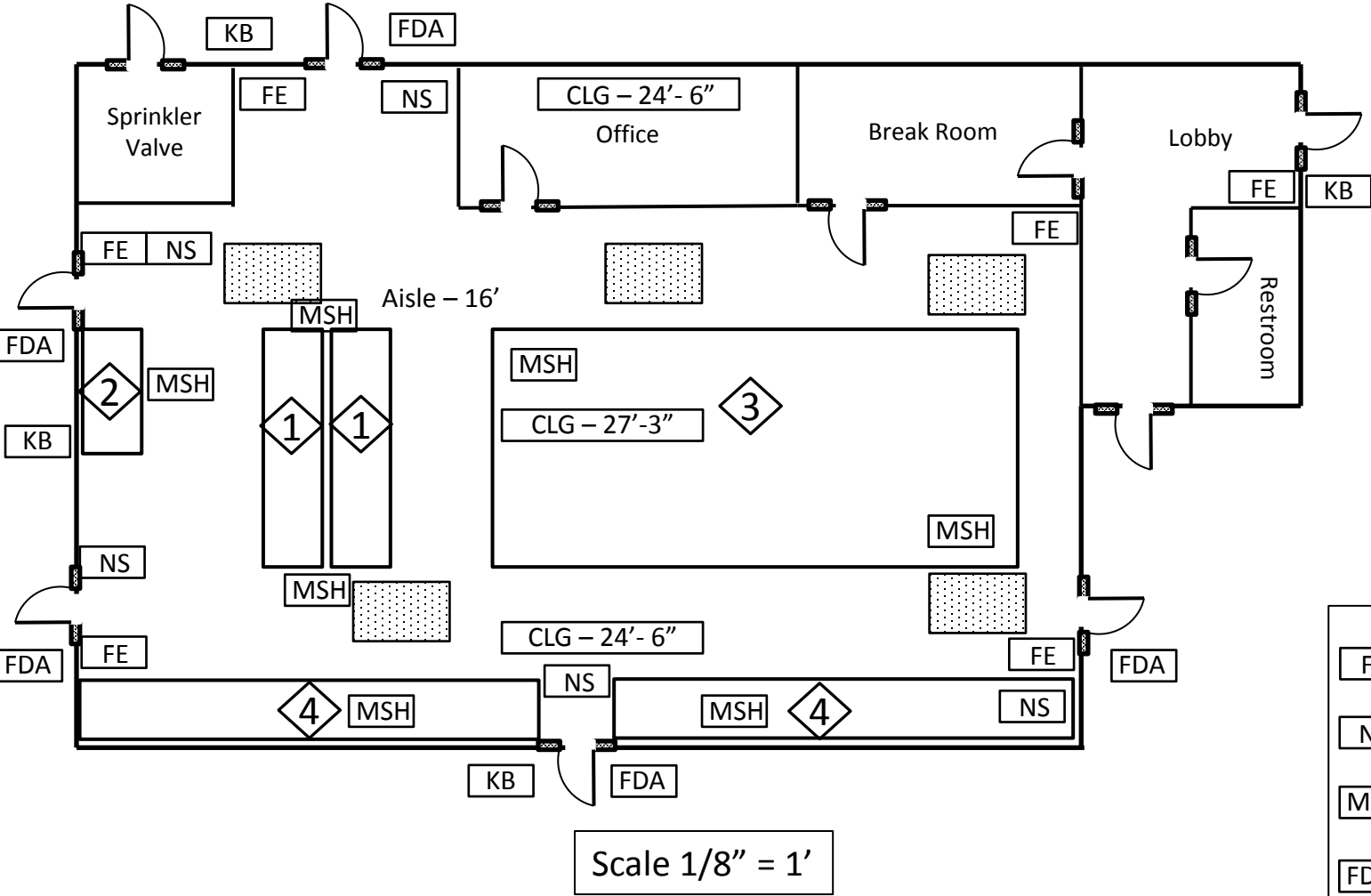
Shelf Storage – Class III Commodity – Open record storage
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2. High-Piled Combustible Storage Square Footage: 13, 500

3. Fire extinguishers: Rating 4A: 40B: C

4. Fire department access doors are required.

5. Heat and smoke ventilation is required.



Symbol Legend

FE	Fire Extinguisher, 4A: 40B: C
NS	No Smoking Signs
MSH	Maximum Storage Height
FDA	Fire Department Access Door
KB	Fire Department Key Box
CLG – xx'-xx"	Ceiling Height
	Automatic Smoke/Heat Vents

Code and Standards:

SFPC: (Edition Year)
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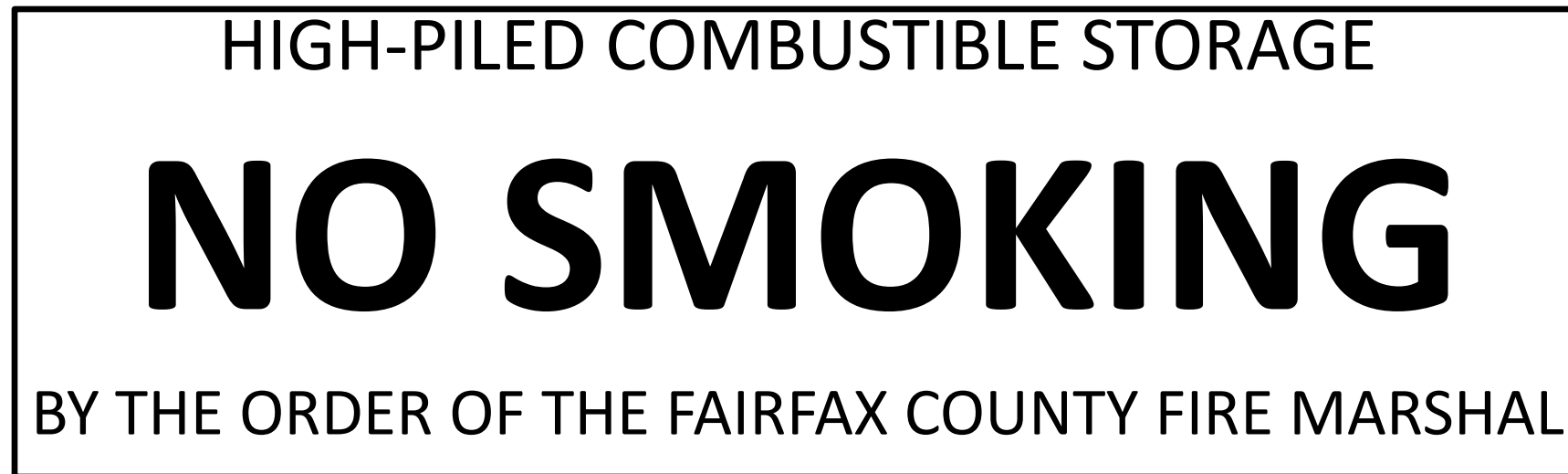
Drawn By: Date:

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High-Piled Storage Plan HPS-001

This is the required signage for “No Smoking”.

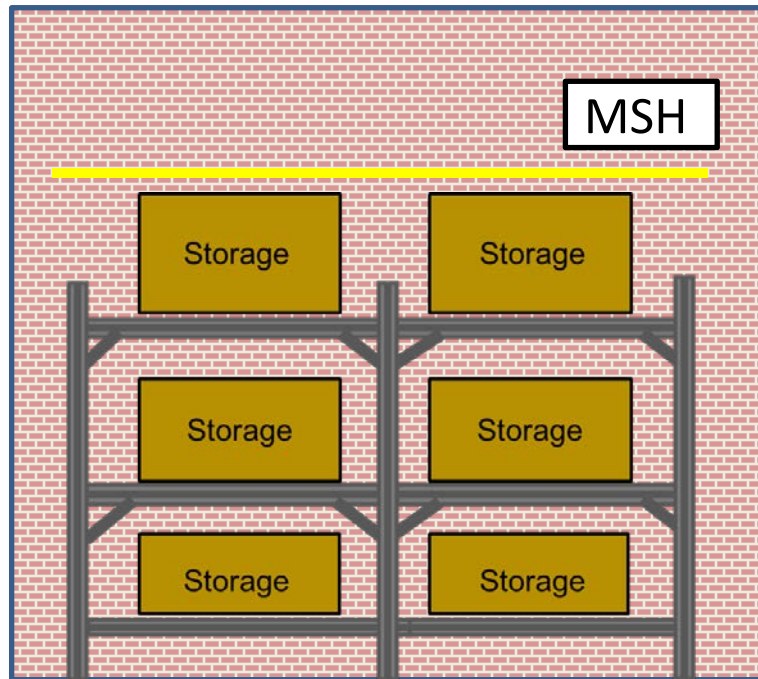
Signage should be clearly legible, visible from distances of approximately 25 feet, display lettering on a contrasting background, and proportion wording approximately as shown:



Storage Height Limitation Signage

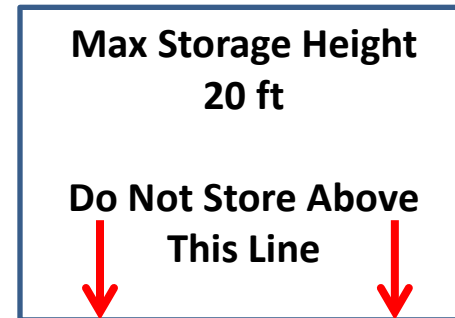
- Visual indication shall be as described below. Alternative means may be approved where a written request is submitted for review.

Storage along a wall.



MSH = Max Storage Height Sign

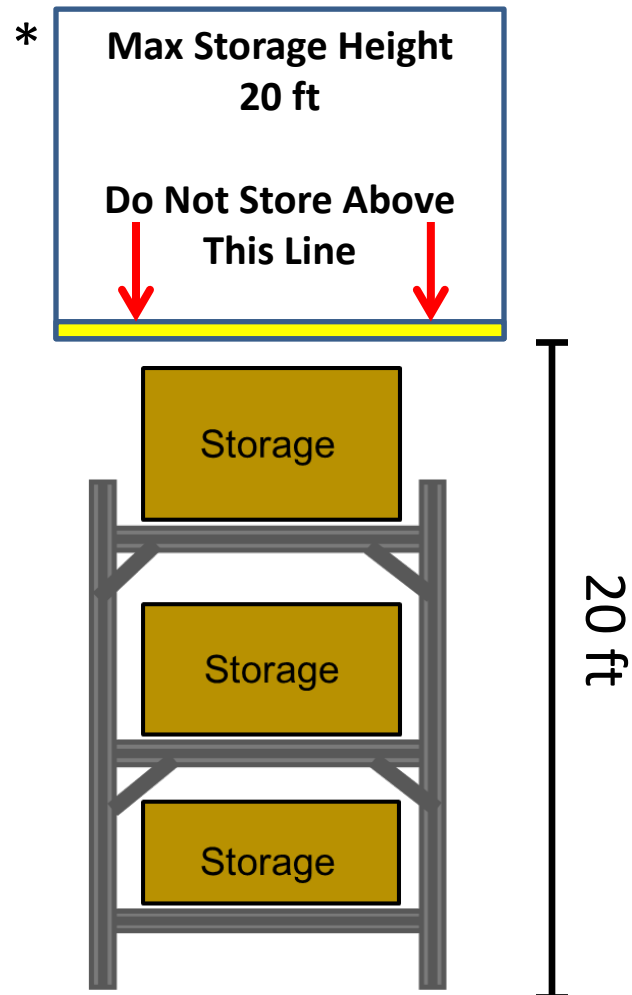
Max Storage Height Sign.



- Provide a line to indicate max storage height.

Storage Height Limitation Signage

Storage located in aisles.



- *Sign not to scale. Sign is larger to show detail.
- Sign is suspended from under ceiling.
- The sign line located and measured from finished floor.